

Abstract

The object of the present invention is to establish a technology for directly evaluating polishing pad surface conditions, to allow high-precision CMP process management, and to improve process throughput. The pad surface is illuminated with light. The intensity of reflected light or fluorescence from the illuminated area or an intensity distribution image is used directly evaluate the pad surface condition. Based on the results of this evaluation, conditioning conditions for a conditioner are optimized, thus allowing high-precision CMP processing while maintaining good pad surface conditions.